Case Report

Medical Principles and Practice

Med Princ Pract 2019;28:394–396
DOI: 10.1159/000499495

Received: August 30, 2018
Accepted: March 11, 2019
Published online: March 12, 2019

An Atypical Presentation of Raynaud's Disease

Omar Viswanath[a–c] Jacquelin Peck[d] Jatinder S. Gill[e]

[a]Valley Anesthesiology and Pain Consultants, Phoenix, AZ, USA; [b]Department of Anesthesiology, University of Arizona College of Medicine-Phoenix, Phoenix, AZ, USA; [c]Department of Anesthesiology, Creighton University School of Medicine, Omaha, NE, USA; [d]Department of Anesthesiology, Mt. Sinai Medical Center of Florida, Miami Beach, FL, USA; [e]Department of Anesthesia, Critical Care, and Pain Medicine, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, USA

Significance of the Study

- A continued multidisciplinary provider effort to find a formal diagnosis utilizing a tailored, multifactorial pharmacologic, interventional, and psychological treatment plan that can improve a patient's life on a day-to-day basis.

Keywords
Raynaud's disease · Fabry's disease · Chilblain's disease · Paronychia · Stellate ganglion

Abstract
Objective: A 57-year-old female with a 33-year history of constant hand discoloration and paronychia had undergone multiple evaluations with a failure to find a diagnosis. She continues to undergo an evolving treatment regimen and diagnostic workup in an effort to find a long-eluded diagnosis. ***Clinical Presentation:*** She began to develop superficial ulcerations over the proximal phalanx of her fingers, often pruritic and erythematous, with pain and edema. ***Intervention:*** She has since been managed with nifedipine and sildenafil and intermittent stellate ganglion blocks. ***Conclusion:*** Despite still lacking a formal diagnosis, her constellation of symptoms is most likely the result of an atypical presentation of Raynaud's disease.

Introduction

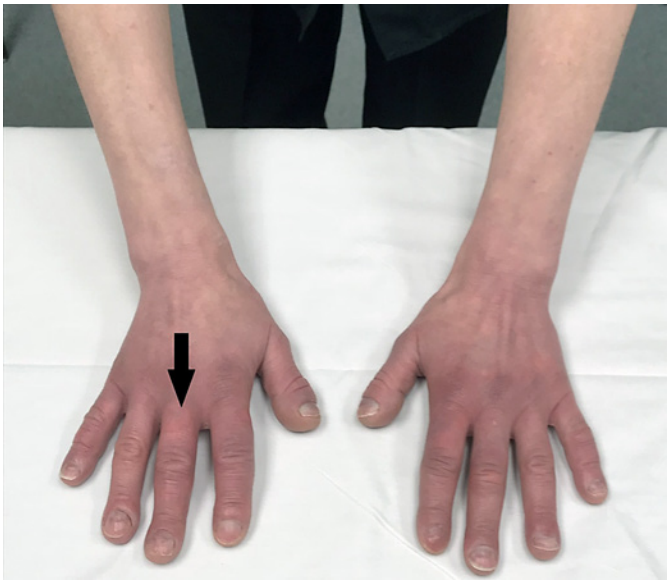
A 57-year-old female presented with a 33-year history of constant hand discoloration and paronychia that was initially triggered by increased physical activity, heat, and cold. Ten years ago, she began to develop superficial ulcerations over the proximal phalanx of her fingers, often pruritic and erythematous. She had undergone multiple evaluations by rheumatologists, dermatologists, pain medicine specialists, geneticists, and neurologists with a failure to find an underlying autoimmune or genetic disease despite extensive investigations. She has had multiple serology workups, all returning negative.

Through the years, her differential diagnosis has included primary Raynaud's phenomenon, atypical Raynaud's, Chilblain's disease, Fabry's disease, and mixed connective tissue disease amongst others. She has since been managed with nifedipine and sildenafil, which have provided substantial relief. She underwent two stellate ganglion blocks with partial, temporary pain relief.

KARGER

E-Mail karger@karger.com
www.karger.com/mpp

Omar Viswanath
Valley Anesthesiology and Pain Consultants, Envision Physician Services
645 E. Missouri Avenue, Suite 300
Phoenix, AZ 85012 (USA)
E-Mail viswanoy@gmail.com



Color version available online

Fig. 1. Fixed discoloration of the patient's upper extremities. Paronychia can be seen as well as superficial ulcerations over the proximal phalanx (black arrow).

Case Report

A 57-year-old Caucasian female with a 33-year history of fixed acrocyanosis of the upper extremities presented to the chronic pain service for evaluation. The patient, who was a dancer and a gymnast, reported that her symptoms began at the age of 14 as flushing, swelling, and pain. These symptoms were triggered by physical activity, heat, and cold. Cold exposure additionally resulted in paresthesia and cyanosis. These symptoms initially lasted minutes to hours but have since progressed, and her current hand discoloration is persistent (Fig. 1). Additionally, localized edema was triggered preventing flexing of the digits, lasting for several weeks at a time. The patient also described cutaneous ulcerations between digits that spare her joints as well as lesions on the extensor surface of the proximal phalanx of her fingers (Fig. 1, black arrow), that are often pruritic and erythematous. There was no evidence of any capillary or venule impact or subsequent evidence of telangiectasia on her skin. Additionally, video capillaroscopy was not performed on the patient during the rheumatologic workup.

The patient has a past medical history of congenital hip dysplasia, nonspecific esophageal dysmotility, prominent livedo reticularis on her lower extremities, chronic fatigue, and dyspnea. She also has a family history of one sister with Raynaud's syndrome. The patient presented to the dermatology and rheumatology clinics and was initially diagnosed with fibromyalgia. She reported substantial relief with nifedipine (90 mg) extended release and sildenafil (20 mg) twice daily. She also presented to the pulmonary clinic for evaluation of dyspnea and pulmonary function test that showed a DLCO 133% with an FEV1/FVC ratio of 86%. There was no evidence of interstitial lung disease, pulmonary hypertension or any other pulmonary explanation for the dyspnea. She underwent two stellate ganglion blocks with partial, temporary relief from upper extremity pain.

Additional workup revealed an ANA titer of 1:40, negative double-stranded DNA, negative anticentromere, negative anti-RNA polymerase III, negative anti-U1-RNP, and negative anti-Scl-70. No cryoglobulins or monoclonal proteins were detected. Hepatitis C screen was negative, and complement levels were normal. Over the past few years, the patient had two episodes where she had mild leukopenia with a white blood cell count of 3.5. She had some issues with abnormal thyroid function tests in the past with mildly elevated TSH of 4.9 and 5.3.

Discussion

The combination of family history, clinical presentation, and cutaneous symptoms triggered by cold is suggestive of atypical Raynaud's syndrome. However, the fixed discoloration without return to baseline is atypical. Her cutaneous lesions also do not affect the tips of her fingers or toes, and she experiences minimal disruption to capillary refill, making these cutaneous manifestations an unlikely direct consequence of Raynaud's phenomenon. It is likely that our patient is experiencing an atypical presentation of Raynaud's with concomitant skin ulcerations.

A diagnosis of scleroderma was also considered; the patient's cutaneous symptoms, esophageal dysmotility, fatigue, and dyspnea potentials support this diagnosis. However, there is minimal disruption to capillary refill, and the patient does not meet the 2012 ACR/EULAR criteria [1]. The patient also tested negative for scleroderma-specific antibodies, is without evidence of interstitial lung disease, and has no sclerodactyly. Additionally, though the patient's symptoms have progressed since the time of onset, her disease has been stable for approximately 30 years, making connective tissue disease less likely.

Chilblain's disease is another possibility. Chilblain's disease may cause pruritic skin lesions in association with Raynaud's phenomenon. However, the patients' skin lesions do not have the traditional appearance of Chilblain's lesions [2]. The patient complained of additional erythema of her ears, raising the possibility of relapsing polychondritis. However, she did not experience ear, nose, or laryngotracheobronchial edema, and her symptomatic episodes resolved too quickly to fully fit a diagnosis of relapsing polychondritis.

Fabry's disease is another interesting consideration. Fabry's disease in females is always heterogenous, which may lead to atypical presentation [3]. The patient's symptoms began in her teenage years as episodic pain and flushing in her distal extremities, and only later became

fixed acanthosis. Paresthesia and triggers of physical activity in addition to cold and heat also support a diagnosis of heterozygous Fabry's. There have been cases of Fabry's with acanthosis as the presenting or only symptom. Additionally, esophageal dysmotility has been described among Fabry's disease patients, and livedo reticularis can be seen because of vasculopathy. However, the expected skin discoloration would be expected to affect the trunk region, a pertinent family history is lacking, and "whorls" were absent on follow-up slit lamp examination. Definitive diagnosis in a heterozygous female is difficult, and a diagnosis of atypical Raynaud's is more likely.

Mixed connective tissue disease is another possible diagnosis for this patient. However, this diagnosis is difficult to definitively make given non-consensus with regard to its classification criteria, diagnoses, and standard of care [4]. Mixed connective tissue disease is an overlap condition with features of several different autoimmune connective tissue diseases, specifically systemic sclerosis, systemic lupus erythematous, and dermatomyositis in patients with antibodies targeting the U1 small nuclear ribonucleoprotein particle (U1 snRNP) [4]. This diagnosis is less likely given the patient did not have positive U1 snRNP antibodies and did not respond to low-dose steroids, which is usually a pharmacologic therapy that has beneficial effects on affected patients.

Conclusion

We present the case of a patient with three decades of stable acrocyanosis in addition to episodes of pain, edema, and cutaneous ulceration triggered by stressors such as exertion, heat, and cold. Despite numerous consultations and despite extensive serological testing, a formal diagnosis evaded her. The symptoms and family history of Raynaud's phenomenon suggest that this is a case of atypical presentation of Raynaud's disease. Her pain and edema are well managed with a combination of intermittent stellate ganglion blocks, and daily sildenafil and nifedipine. This case report highlights the importance of continued provider efforts, employing a multidisciplinary approach, to not only try and reach a formal diagnosis but also to find a tailored multifactorial pharmacologic, interventional, and psychological treatment plan that can improve the quality of life of such patients.

Statement of Ethics

The patient has given informed written consent to be included in this publication.

Disclosure Statement

The authors have no conflicts of interest to disclose.

References

1 Van den Hoogen F, Khanna D, Fransen J, Johnson SR, Baron M, Tyndall A, et al. Classification Criteria for Systemic Sclerosis: An ACR-EULAR Collaborative Initiative. Arthritis Rheum. 2013;65(11):2737–47.

2 Shima T, Yamamoto Y, Kanazawa N, Murata KY, Ito H, Kondo T, et al. Repeated hyperhidrosis and chilblain-like swelling with ulceration of the fingers and toes in hereditary sensory and autonomic neuropathy type II. J Dermatol. 2018 Nov;45(11):e308–9. ; Epub ahead of print.

3 Lenders M, Hennermann JB, Kurschat C, Rolfs A, Canaan-Kühl S, Sommer C, et al. Multicenter Female Fabry Study (MFFS) - clinical survey on current treatment of females with Fabry disease. Orphanet J Rare Dis. 2016 Jun;11(1):88.

4 Chaigne B, Scirè CA, Talarico R, Alexander T, Amoura Z, Avcin T, et al. Mixed connective tissue disease: state of the art on clinical practice guidelines. RMD Open. 2018 Oct;4 Suppl 1:e000783.